

JAN 1932

1. Mhh. 1891.1

HARVARD MEDICAL ALUMNI BULLETIN

The Infantile Paralysis Problem

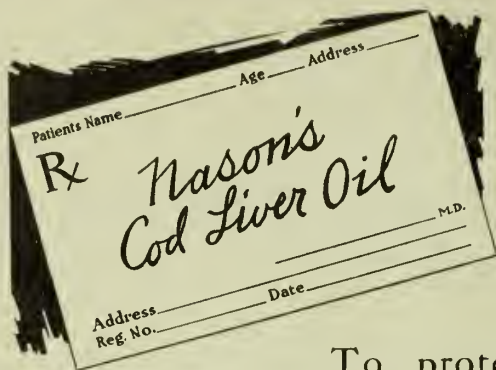
by W. Lloyd Aycock, M.D.

Graduate Courses in Medicine

by Frank R. Ober, M.D.



January, 1932



High Vitamin Potency
Plus + Palatability

1000 A Units per gram

150 D Units per gram

Accepted A. M. A.
Council on Pharmacy
and Chemistry

To protect your patient
against the possibility of
receiving inferior or untest-
ed commercial oils, may we
suggest that you prescribe
Nason's

PALATABLE COD LIVER OIL

TAILBY NASON COMPANY, Kendall Sq., CAMBRIDGE, MASS.



Charles W. Broadbent Company

Medical, Surgical and Hospital Supplies

With the Harvard Medical School from 1898 until 1916

With F. H. Thomas from 1916 until 1925

To reach by telephone call Beacon 4672 or 4673

665 Huntington Avenue, Boston, Mass.

Near Harvard Medical School and the Brigham Hospital

New Books for Physicians

Diabetes

By ELLIOTT P. JOSLIN

The latest issue of the well-known Harvard Health Talks is a discussion of the growing seriousness of diabetes, possibilities for controlling it, and the part the individual can play in combating it. \$1.00.

Tobacco

By WALTER L. MENDENHALL

"Concise and non-technical account of the effects of tobacco. Contains tables dealing with average amounts of nicotine in various brands of cigarettes, average grades of smoking and non-smoking students, and mental and physical characteristics of smokers and non-smokers."—*Pittsburgh Bulletin*.

"Fair and undogmatical, leaving the reader to draw his own conclusions."—*London Times*. \$1.00.

Pneumonia

By FREDERICK TAYLOR LORD

"An authoritative and critical presentation of the subject."—*Clinical Medicine and Surgery*. "The subject is treated in all its aspects in a scientific but non-technical manner . . . This book deserves to be very widely read."—*American Journal of Public Health*. \$1.00.

Genetics and Eugenics

By WILLIAM E. CASTLE

"The growth of this standard textbook in successive editions is evidence of the high esteem in which it is held by scholars. It should be studied not only by the professional geneticist and college student, but by everyone who wants to keep in touch with the subject."—*American Journal of Physical Anthropology*. Fourth revised edition. \$3.00.

The Laboratory Mouse

By CLYDE E. KEELER

"Presents useful information, not heretofore assembled, on the origin, history, distribution, development, hereditary transmission of variations, and methods of breeding of the mouse."—*Journal of the American Medical Association*. "Not only biological and medical investigators but fanciers will find much of interest in its pages."—*American Journal of Science*. \$1.50.

HARVARD UNIVERSITY PRESS

29 RANDALL HALL

CAMBRIDGE, MASS.



Portrait of Dr. Cannon, Recently Presented to the University

The Infantile Paralysis Problem.

By W. Lloyd Aycock, M.D.

AS a result of the severe epidemic of infantile paralysis in 1916, the Harvard Infantile Paralysis Commission was organized by a group of public spirited men and doctors who anticipated the necessity for some organized attempt to take care of the large number of cripples suddenly thrust upon the community at that time. The work of the Commission has been administered by the Harvard Medical School and the funds have been raised through the efforts of the Commission by public subscription.

While this reconstructive work has been its most pressing undertaking, the Commission has also organized a research division to study the behavior of the disease in an attempt to gain information which might lead to the prevention of the one serious consequence of the disease, paralysis, or to the prevention of the disease itself. This work has been conducted in conjunction with a similar project of the Vermont Department of Public Health.

This article is intended to convey the present conception of the epidemiology of the disease which is the result, largely, of work done by the Commission. At the same time it will give some idea of the extent and scope of the work done by the Commission and will point out some of the tasks that are still before the Commission in its attempt to control this distressing disease.

Earlier students of infantile paralysis had little upon which to base a conception of its epidemiology besides such observations as could be made in attempting to trace the infection from one case to the next. One of the theories advanced was that the dis-

ease is transmitted through the upper respiratory secretions by contact—a theory originating not so much from the frequency with which contact between cases was observed, as from the suspicion that mild illness coincident with frank cases, not definitely diagnosable but suspected as abortive forms of the disease, aided in the dissemination of the infection. Failing to find these in sufficient number to account for the spread of the disease, there was added the supposed transmission of the virus through healthy persons. The incompleteness of this early evidence of transmission by contact, due largely, perhaps, to the lack of laboratory procedures for verification of field observations, did not place it on such a firm footing, that it would not readily be thrown aside for any newly proposed theories, of which there have been many.

Modern epidemiology does not deal alone with attempts to trace each case to its source of infection although this is, in a sense, its ultimate object. It includes analysis of the more general circumstances under which the disease occurs, or under which its occurrence varies; and it consists as much in multiplication of probabilities as in actual demonstration of fact. It is largely from these more indirect studies, together with the limited laboratory tests which are available, that we are able to formulate anything like a complete idea of the epidemiology of infantile paralysis.

A point of first importance is the actual extent of the spread of the virus. The idea that this is greater than is indicated by recognizable cases, is suggested by evidence of mild forms of the disease and healthy

carriers. The more rapid decrease in the incidence of the disease with increase in age, in urban than in rural populations, suggests that in older persons there is a widespread immunity from previous exposure to the virus—exposure, in spite of far fewer cases, as extensive as in such common contact diseases as measles and diphtheria. That the age distribution of measles is largely a measure of previous exposure, is easily seen from observations of the clinical disease alone. In diphtheria the reasons for attributing an equal immunity amongst older persons to previous exposure, while not so apparent, are none the less convincing when we consider the significance of the Schick test and the healthy carrier rate. The latter, in view of the average duration of carriage, is sufficient to account for exposure to the organism to an extent equal to that of immunity as indicated by the Schick test. That the equally extensive immunity to infantile paralysis, suggested by the age distribution of the disease, actually exists, has now been demonstrated by neutralization tests done by Dr. Kramer and myself on a small but significant number of individuals of different age groups in urban and rural communities. The reasons for interpreting this immunity as an indication of previous exposure to the virus are the same as in the case of diphtheria, with the exception of evidence pertaining to the carrier rate. While no statistics are available concerning the healthy carrier rate in infantile paralysis, the virus has been detected in healthy persons. When we remember the relatively small number of attempts which have been made to detect the virus and the uncertainty of the technique by which this has been accomplished (it is not even readily transferred to the monkey from the spinal cord of known cases), the occasional reported finding of the virus in the upper respiratory passages of healthy persons might well be indicative of a healthy carrier rate not unlike that of diphtheria. When we consider, then, that the extent of immunity to infantile paralysis is the

same as for measles and diphtheria and that the rapidity of its development varies in the same way with concentration of population, we have evidence that both the extent and rapidity of the spread of the virus of infantile paralysis are the same as in measles or diphtheria.

When we add to this close analogy the finding of the virus in the upper respiratory secretions of patients suffering from the disease, animals experimentally infected, and healthy persons, and the ease with which animals can be given the disease by merely placing a drop of the virus on the nasal mucous membrane; and when we consider further that exposure to the virus of infantile paralysis as indicated by evidence of immunity is as world-wide as only contact infections are known to be, we cannot but believe that earlier students of the disease were right, when from far less complete data than is now available, they concluded that the disease was transmitted by contact. The differences between the epidemiology of infantile paralysis and that of other contact diseases are due not to any difference in the manner or extent of the spread of its virus but to differences in the frequency with which initial exposure to the virus results in sub-clinical immunization or in the frank disease.

Some of the features of infantile paralysis which have seemed not to fulfill the criteria for contact transmission and which have been held as arguments against transmission in this manner, are the infrequency of multiple cases in families or in institutions, the infrequency of transmission of the disease to nurses and attendants of cases, and, in a more general way, the seasonal prevalence of the disease and the tendency in most years to rural preponderance. All of these features appear to be at variance with the common contact diseases; but when viewed in the light of widespread immunization with relatively low disease incidence, the lack of analogy can, I think, be explained. Thus, in view of the relative frequency with which initial exposure in diphtheria and ini-

tial exposure in infantile paralysis results in the clinical disease or in immunization without disease, it would be expected that traceable contact between frank cases of infantile paralysis would be encountered comparatively rarely and, conversely, only the exceptional case would be attributable to direct contact with a previous frank case, the majority arising from contact with mild cases or healthy carriers. The infrequency of multiple cases in families and institutions and the rarity of the disease in nurses or attendants of cases can be explained in the same way.

The idea of rural preponderance of cases of infantile paralysis has gained emphasis more from the striking occurrence of the disease in remote localities, far removed from other cases, than from adequate statistical analysis. As a matter of fact, the total incidence of infantile paralysis in the registration area of the United States, since the disease was made reportable, shows an urban-rural ratio approximately the same as that of measles. But when we examine the individual years we find that this is due to the overwhelming urban preponderance in the large epidemic year of 1916, while most of the other years show a slightly higher rate for the rural portion of the registration area. However, if we exclude the year 1916, we find only a slight rural preponderance, not different from that of whooping cough. This seeming irregularity may likewise be accounted for by the comparative rarity with which initial exposure results in the disease. Thus, on the assumption of a constant exposure rate, greater in urban than in rural populations due to concentration of population, falling evenly on individuals not previously exposed and those already exposed, and assuming further that initial exposure produces immunity—either permanent or to be reinforced by subsequent exposures—the number of immune individuals (those exposed at least once) in an urban population would exceed those in a rural population. But due to the more rapid accumulation of immunes, the number of initial exposures in

a given period would decrease more rapidly in the urban population, so that after a time, with an exposure rate in the rural population of only one-half of the urban rate, the number of *initial* exposures would actually exceed those in the urban population. Hence, if immunization has already reached a more advanced point before initial exposure results in disease, as must be the case in infantile paralysis with its preponderant sub-clinical immunization, even with a slower transmission of the virus, the number of cases in a rural population would exceed that in an urban population.

Seasonal prevalence is another feature of the disease which does not appear to be in accord with that of contact diseases. But this, too, may be explained by the peculiarly preponderant immunization in infantile paralysis. Since the extent to which a population is immunized at any given age is known, the minimal exposure rate which would be necessary to accomplish this can be figured. Thus, say, in a population of 100,000 in which 90 per cent. of adults are immune, indicating at least one exposure to the virus, it can be figured that approximately 2,000 new exposures a year, or an average of 167 new exposures a month, would be necessary to maintain immunization to this extent. If we assume that these exposures take place at an even rate the year round, we see that the number of new exposures taking place in any given month is sufficient to account for the largest number of cases of infantile paralysis occurring in any month in a population of this size, even in the worst epidemics (around two cases per thousand). In other words, the worst epidemics which we have could occur without any increase in the rate of spread of the virus over that which must prevail in order to maintain the degree of immunity shown to exist. Thus, we may even speculate that the frequency with which initial exposure to the virus causes immunity or disease is determined largely according to the season of the year when exposure takes place.

That season may be an important factor

in determining the frequency with which initial exposure to the virus causes disease or immunity, is suggested by the correlation of statistics of the disease in cool and in warm climates with changes in season in the two climates. That the diminished incidence in the South is due to a diminution in the frequency with which exposure causes disease and not to lack of exposure to the virus, is indicated by evidence of immunity and hence of exposure to the virus in the South as extensive as in the North. The age distribution wherever the disease occurs, agrees closely with that already shown for the Northern United States, with the exception of two outbreaks of the "virgin soil" type—on the island of Nauru in 1910 and in New Guinea in 1929—where the age distribution of cases indicated the absence of a relatively high immunity in adults. It therefore appears that the extent to which the virus spreads in the South is equal to that in the North. In this respect infantile paralysis is quite similar to diphtheria.

When we come to examine the seasonal prevalence of infantile paralysis in cool and warm climates we find one of its curious paradoxes. Although a disease of warm weather, it is less frequent in warm climates. Nevertheless, the seasonal curves of the disease in both the North and South follow that of the respective seasons. Although the frequency with which the virus produces disease does not correlate with warm weather in the two climates, it does correlate with the fluctuations in seasons in each of the two climates. Where the change from winter to summer is great (in the North) the incidence of infantile paralysis is high, and where this change is relatively slight, (in the South), it is low.

Climatic differences and seasonal variations in physiologic conditions are known to occur. The fundamental experiments of Reid Hunt show that such changes in physiology influence resistance to certain poisons. In recent years many workers have demonstrated the effects of alteration in physiology upon resistance to infection. Some as

yet undetermined climatic and seasonal variation in physiology may be associated with the variation in the frequency with which exposure to the virus of infantile paralysis causes the disease or causes immunity without disease. It is not meant to imply that such seasonal changes in the body are to be considered as abnormal but rather abnormal adjustments to varying environment. Failure of some such adaptive change in bodily function could result in a deficiency or imbalance, greater in summer than in winter but greater in cooler than in warmer climates. Draper first pointed out indications of physiologic imbalance in persons attacked by infantile paralysis. This would suggest that some such failure of the body to meet the stress of seasonal adjustment may be the factor responsible for the individual predisposition which determines the frequency with which initial exposure to the virus of infantile paralysis produces the paralytic disease, rather than immunization without recognizable signs of the disease. In other words, there would appear to be a form of resistance distinct from that which arises from exposure to the virus (immunity) which determines the result of an individual's first exposure.

As to the prevention of the disease by attempts to check the spread of the virus, there is, I think, in view of the epidemiologic evidence for widespread distribution of the virus, not a cheerful prospect along the lines of isolation and quarantine of cases or of the as yet undetectable carriers. This, of course, does not mean that such measures should not be employed, wherever possible, as individual prophylaxis.

Although it may be possible passively to immunize individuals for a short time by the administration of immune serum, there does not seem to be any very great prospect that this could become of very general practicability for the reason that it would necessarily be limited to those known to be exposed to sources of infection, only a small percentage of whom are to develop the disease. This is especially true in view of the fact that the vast majority who develop

the disease are not known to have been exposed to any source of infection.

Monkeys can be actively immunized by a tedious series of intracutaneous inoculations of the active virus, but this does not hold a great deal of promise for the reason that, even though non-immunes could be selected on the basis of neutralization tests, we should be compelled to immunize large numbers of individuals in order to protect a very small fraction amongst them who actually are destined to develop the disease upon exposure to the virus. It does not seem likely on account of the low percentage efficacy of such a method—even though the procedure becomes possible through further experimentation—that it could become of general practical use.

As indicated by this resumé of the epidemiology of the disease, the dissemination of the virus of infantile paralysis represents a parasitism so well adapted to ordi-

nary and probably unavoidable human contact that there would seem to be little hope of instituting measures which could effectively check the spread of the virus and it would also appear that, due to the epidemiological peculiarities of the disease, passive or active immunization can hardly be looked upon as feasible methods of preventing the occurrence of the disease. I, therefore, feel that this appraisal of the epidemiology of infantile paralysis suggests that none of these conventional methods of approach will afford a solution of the infantile paralysis problem and that we should turn to the study of the physiological fault which determines individual predisposition to the disease on first exposure to the virus in the hope that this may be corrected either in the individual or *en masse*, so that initial exposure to the virus would regularly cause a sub-clinical immunity rather than the paralytic disease.

Graduate Courses in Medicine

By Frank R. Ober, M.D.

WHY are there not more physicians attending graduate courses in medicine? In this brief article there will be presented some of the many advantages of the Harvard University Medical School Courses for Graduates and a few figures showing the attendance for the past ten years.

The chief function of a medical school is to educate students in the healing art. In performing this function, however, it is necessary to do more. If the school is to live, it must develop teachers, research workers, and executives. There are twenty-five medical schools in the United States offering more or less work in graduate medicine and eight schools offering courses in public health.

Harvard Medical School has 4,472 liv-

ing graduates, 1,287 of whom have graduated within the past ten years. During this period 5,150 students have registered in the Courses for Graduates. Some of these are repeaters; a few are chronic repeaters. Out of this number there were 3,597 having degrees in medicine and 1,553 *not* having degrees in medicine. Those not having degrees were undergraduate students taking summer laboratory courses or women taking courses in physiotherapy.

Of these 5,150 students, 316 were graduates of Harvard Medical School (128 of whom were repeaters); 287 were graduates of Tufts College Medical School; 152 were graduates of Jefferson Medical School; 133 were graduates of University of Maryland Medical School; 130 were graduates of Boston University Medical School; 110 were graduates of University of Pennsylvania Medical

Dr. Ober is Assistant Dean of Harvard Medical School Courses for Graduates.

School; 72 were Navy officers; 8 were Army officers; and 794 were women. The rest came from schools from all over the United States, Canada, Mexico, South America, Europe, and Asia.

The Courses for Graduates of Harvard Medical School has for many years offered suitable courses in almost every field of medicine, and it has endeavored to alter and improve the courses so that they are up to date and meet the needs of the physician so far as is practicable. There are a few long courses in some of the specialties, and others are being added from time to time. There are shorter courses for those who wish to have instruction in new problems, diagnosis, and therapy. There are a few short, intensive courses in certain subjects of interest, such as fractures and thyroid diseases; and there are also monthly courses in many special subjects, such as orthopedics, obstetrics, medicine, and laryngology. These courses, for the most part, are all manned by men who have done or who are doing special work in those subjects which they teach, and who have in many cases national and international reputations. This combination ought to be attractive to any physician interested in the progress of medicine and his own self-advancement.

There must be something seriously wrong with a great body of physicians who will not accept scholarships in graduate schools when they are offered. For example, the Commonwealth Fund of New York will pay the tuition and a stipend of \$250 a month to each of fifteen doctors in Massachusetts if they will go to a medical school for four months. One would think that there would be hoards of men rushing forward to avail themselves of this wonderful opportunity, but, sad to relate, they do not seem interested in the least. Does any one know the answer?

The probable answers are that they are satisfied with what they have, or that they are afraid their neighbors will steal their patients if they are left, or else they do not wish to accept charity, or, again, there may have been something lacking in the under-

graduate teaching and contacts whereby the student was not stimulated to keep up his interest in medicine and its progress by frequent returns to the medical school after graduation. The one answer to "State Medicine" so-called, or Insurance Medicine, is for the practitioner to keep himself alive to all the modern problems of medicine, not through the drug agents and such, but through the medical schools and their teaching hospitals. State medicine means that the general public wants better medicine. State medicine is mass medicine, and the only way to compete with mass production is to furnish something better. This can be done only if all of us keep up with modern progress in those medical subjects with which we have daily contact.

How is the contact between physician and school to be made? Is it or is it not desirable to make such contact? The Harvard Medical School issues a yearly catalogue and advertises its courses regularly in those journals which have a wide circulation. The advertisements are changed frequently and give timely notice of approaching dates for courses. Should the School do more?

PROFESSOR DRINKER AND LOUIS A. SHAW HONORED

For their invention of the respirator, which has maintained respiration and life in hundreds of infantile paralysis patients this past summer and fall, Professor Philip Drinker and Louis A. Shaw of the Harvard School of Public Health recently received the John Scott Medals for 1931.

The respirator, a machine which was designed to replace manual methods of artificial respiration in cases in which the procedure must be carried out for days or weeks, was developed at the request of the Liability Insurance Fund of the New York Consolidated Gas Co. In New York alone over a hundred cases of respiratory failure not caused by infantile paralysis, have been treated with a high percentage of recoveries.

Recent Books by Harvard Medical Men

THE following pages contain the titles of books written by or about Harvard Medical School men, which have come to our attention during the year 1931. It is hoped that information about errors and omissions, if there are such in the list, will be sent to the BULLETIN:

'84—"Leonard Wood." A biography by Hermann Hagedorn. Two volumes. Harper. Pages, 448 and 532. Price \$10.

'85—Robert W. Lovett, "Lovett's Lateral Curvature of the Spine and Round Shoulders." Fifth edition, revised and enlarged by Frank R. Ober, Clinical Professor of Orthopedic Surgery, and Assistant Dean of Courses for Graduates and A. H. Brewster, instructor in orthopedic surgery, at the Harvard Medical School. Dr. Lovett died in 1924; he was for many years a member of the Faculty of the Harvard Medical School, and from 1915 until his death held the chair of John B. and Buckminster Brown Professor of Orthopedic Surgery. Blakiston. Pages, 249. Price, \$3.50.

'89—Edited by Malcolm Storer, Horatio Storer's "Medicina in Numis." An essay on the symbolism of ancient medals and a descriptive list of over 8,000 dealing with medicine.

'89—William Sydney Thayer, Professor, *emeritus*, of Medicine at Johns Hopkins University, "Osler and Other Papers." A collection of addresses and papers, with five chapters devoted to reminiscences and appreciation of Sir William Osler. Johns Hopkins Press. Pages, 385. Price, \$3.50.

'95—Elliott P. Joslin, Clinical Professor of Medicine at the Harvard Medical School, "Diabetes: its Control by the Individual and the State." Number 16 of the "Harvard Health Talks." Harvard University Press. Pages, 80. Price, \$1.

'95—William H. Robey, Clinical Professor of Medicine at the Harvard Medical School, "Headache." Lippincott. Pages, 247. Price, \$5.

'96—Sidney I. Schwab, Professor of Clinical Neurology at Washington University, St. Louis, "Acute Encephalitis." Harper. Price, \$3.

'99—Robert B. Osgood, John Ball and Buckminster Brown Professor of Orthopedic Surgery, *emeritus*, at the Harvard Medical School, with Nathaniel Allison, '01, "Fundamentals of Orthopedic Surgery in General Medicine and Surgery." Macmillan.

'01—Nathaniel Allison, Professor of Surgery

at The University of Chicago, with Robert B. Osgood, '99, "Fundamentals of Orthopedic Surgery in General Medicine and Surgery." Macmillan. Also, (with another), "Diagnosis in Joint Disease." William Wood, New York City. Pages, 208. Price, \$9.

'03—John B. Hawes, 2d, "Talks on Tuberculosis with Patients and their Friends." Advice to the layman on preventing and fighting the disease, by the president of the Boston Tuberculosis Association. Houghton Mifflin. Pages, 189. Price, \$2.

'03—John Homans, Assistant Professor of Surgery at the Harvard Medical School, "A Textbook of Surgery." Compiled from lectures by members of the Surgical Department of the Harvard Medical School. C. C. Thomas, Springfield, Mass. Pages, 1,195. Price, \$9.

'08—Earl D. Bond, Professor of Psychiatry at the University of Pennsylvania, with Kenneth E. Appel, '24, "The Treatment of Behavior Disorders following Encephalitis." An experiment in re-education. Commonwealth Fund. Pages, 163. Price, \$1.75.

'11—Paul Dudley White, instructor in medicine at the Harvard Medical School, "Heart Disease; Diagnosis and Treatment." Macmillan.

'12—Ernest H. Gruening, "The Public Pays." The story of the manner in which, according to the author, the power interests attempt to control pulpit and press, school and college, radio, motion picture, and public forum. Vanguard Press. Pages, 273. Price, \$2.50.

'13—Norman B. Cole, (with another), "First Aid for Boys". A manual for Boy Scouts and others interested in prompt help for the injured and the sick. Revised edition. Appleton. Pages, 208. Price, \$1.50.

Knopf. Pages, 249. Price, \$2.50.

'24—Kenneth E. Appel, (with another), "Discovering Ourselves". The aim and scope of mental hygiene explained by two psychiatrists; for the layman. Macmillan. Pages, 319. Price, \$3. Also with Earl D. Bond, '08, "Treatment of Behavior Disorders following Encephalitis." An experiment in re-education. Commonwealth Fund. Pages, 163. Price, \$1.75.

'24—Alexander Randall, "Surgical Pathology of Prostatic Obstructions." Williams & Wilkins. Pages, 279. Price, \$7.

'29—James F. Thackston, (with another), "Human Health." A textbook on physiology and hygiene for elementary and secondary schools. Holt. Pages, 469. Price, \$1.40.

Frank R. Ober, Clinical Professor of Orthopedic Surgery, and A. H. Brewster, instructor in

orthopedic surgery, at the Harvard Medical School, editors, "Lovett's Lateral Curvature of the Spine and Round Shoulders" by the late Robert W. Lovett, '85, formerly John Ball and Buckminster Brown Professor of Orthopedic Surgery at the School. Fifth, revised, and enlarged edition. Blakiston. Pages, 249. Price, \$3.50.

Percy G. Stiles, Assistant Professor of Physiology at the Harvard Medical School, "Nutritional Physiology." Seventh, revised edition. Saunders. Pages, 313. Price, \$2.25.

'13—Howard E. Ruggles, (with another), "Roentgen Interpretations." Fourth, revised edition. Lea & Febiger. Pages, 339. Price \$5.

'14—Horace Gray, (with another), "Growth in Private School Children." University of Chicago Press. Price, \$3.50.

'15—Lawson G. Lowrey, editor, "Institute for Child Guidance Studies." Selected reprints on social, medical, psychological, and child training fields. Commonwealth Fund. Pages, 298. Price, \$1.50.

'15—Martin W. Peck, instructor in psychiatry at the Harvard Medical School, "Meaning of Psychoanalysis." Based on lectures given to third-year medical students in the School.

GEORGE S. DERBY 1875-1931

On the afternoon of Saturday, December 12, there passed away one of the finest characters in the medical profession of Boston, Dr. George Strong Derby. He was in the prime of life and activity, but recently had had to take an enforced two months' vacation because of overtire. He had just returned to practice when he was taken suddenly ill, and was found to have pneumonia.

Dr. Derby came of an old and honored family of East India merchants in Salem. His father, Dr. Hasket Derby, was one of the first physicians in Boston to specialize in ophthalmology, at a time when specialization in medical practice was a very unusual thing. George Derby followed his father in this specialty, perhaps because of an inherited tendency towards this line of practice. Born in Boston on May 29, 1875, the son of Hasket and Sarah (Mason) Derby, he prepared for college at Noble and Greenough's School in Boston, entered Harvard College with the class of

1896, and graduated from the Harvard Medical School in 1900. From April, 1900, to August 1, 1901, he was a surgical house officer at the Massachusetts General Hospital. On August 5, 1901, he married Mary Brewster Brown of Falmouth, Me. The next two years were spent abroad studying ophthalmology in Vienna under Fuchs, in Friburg under Axenfeld, in Utrecht under Snellen, six weeks in Paris, and three months in London at Moorfields (the Royal London Ophthalmic Hospital). In October, 1903, he returned to Boston and started practice. He soon became associated with the St. Elizabeth's Hospital and the Parental School in West Roxbury, and later became ophthalmic surgeon at the Carney Hospital and clinical assistant at the Massachusetts Eye and Ear Infirmary. This institution became his chief interest, and in 1914 he was appointed ophthalmic surgeon there, and consultant at the Carney Hospital. In 1924, he was appointed Williams Professor of Ophthalmology at the Harvard Medical School, and ophthalmic chief at the Massachusetts Eye and Ear Infirmary; he held these positions until his death. In 1914, on the death of Dr. Thomas Rotch, Derby became medical director of the Infants' Hospital and ophthalmologist thereto. He held this position for only a few years. He was a member of the executive committee of the Boston Medical Library for several years, and was a member of the advisory committee of the Massachusetts Committee for the Blind. He was prominent in the section of ophthalmology of the American Medical Association, being its secretary for several years after 1913, and chairman in 1924. For the past two years he had been president of the Suffolk District Medical Society. In 1905, the Harvard Medical School class of 1900 organized. Derby was elected president, and had retained that office ever since. He was a member of the American Ophthalmological Society, the Ophthalmological Society of the United Kingdom, and the *Deutsche Ophthalmologische Gesellschaft*.

In the spring of 1917, he became a

member of the Red Cross Base Hospital, organized by the Harvard Medical School and the Peter Bent Brigham Hospital, with Harvey Cushing as director, which sailed for France on May 11, 1917. In November, 1917, Derby was transferred to the British Eye Service at Boulogne and later accompanied its chief, Colonel (now Sir) W. T. Lister, on his inspection trips, which took him to almost every part of the British sector. In June, 1918, Derby was transferred to the headquarters of the Medical and Surgical Consultants of the A. E. F. to become assistant to the senior eye consultant, Major Greenwood of Boston. Derby's job was to organize the eye service of the A.E.F., and this work took him, during the summer of 1918, to nearly every mobile, evacuation, and base hospital in the A.E.F. He was also assigned on August 1, 1918, to examine for contagious eye disease all the alien labor companies, some 12,000 men, a motely crowd of Northern Chinese, Indo Chinese, Moroccans, Algerians, Spaniards, Portuguese, and French. This work was completed on November 10, 1918, and he was in Paris on the eleventh to see the armistice celebration. For this work, he was cited by General Pershing.

Derby had great physical strength, and was always much interested in sport. In 1896 he rowed on the college varsity crew, and, during his second year in the Medical School, as was possible under the rules of those days, he rowed again on the varsity crew under Lehman. Exercise of one sort or another was always very necessary to him. He rowed with the Union Boat Club crews for many years after starting practice. He was an expert at court tennis, and played two or three times a week during the winter for many years. Golf, lawn tennis, and boating were a delight to him, and were indulged in whenever he could find time. This was necessarily somewhat limited because of his very busy professional life, so that his games were often played with some tension in regard to time.

He is survived by his wife and two children, Hasket, aged 23, and Mary Brewster,

aged 15. A daughter born in 1910 died in 1912.

Derby's sense of professional responsibility was very keen, and he was an enthusiastic promoter and encourager of research at the Eye and Ear Infirmary, notable among other works being his research on glaucoma. He gave one a sense of great solidarity of character and complete reliability, combined with a quick but rather quiet sense of humor. His standards of life and of professional conduct were of the very best, and his death leaves a void which it will be hard to fill.

R. G. WADSWORTH, M.D.

MEDAL FOR DR. HOWE

Dr. Percy R. Howe, Thomas Alexander Forsyth Professor of Dental Science at the Harvard Dental School and instructor in pathology at the Medical School, has received the Fauchard Medal, which is awarded annually by the magazine *Dental Survey*, for outstanding professional achievement during the year. Dr. Howe, who is also director of the Forsyth Dental Infirmary for Children, Boston, was chosen as the recipient of the medal on account of his researches into the influence of diets on teeth.

DR. HENRY A. CHRISTIAN

Dr. Henry A. Christian, Hersey Professor of the Theory and Practice of Medicine at the Harvard Medical School, received the honorary degree of LL.D. from Western Reserve University in June, 1931. At the international assembly of the Interstate Postgraduate Association of North America, held at Milwaukee from October 19 to 23, he was elected president of the Association.

DR. CANNON TO LECTURE

Dr. Walter B. Cannon will lecture on "Vivisection and Animal Experimentation" on March 11, 1932, in the Auditorium of the Beth Israel Hospital. This lecture is being given under the auspices of the William Harvey Society of Tufts College.

ASSOCIATION OFFICERS

William C. Quinby, *President*
 William B. Breed, *Vice-President*
 James M. Faulkner, *Secretary*
 Augustus Thorndike, Jr., *Treasurer*

COUNCILLORS

A. A. Horner	R. H. Smithwick
R. J. Graves	B. H. Alton
A. M. Burgess	F. M. Rackemann
R. M. Smith	W. H. Robey
Walter G. Phippen	

EDITOR

James M. Faulkner

CONSULTING EDITOR

William B. Breed

BUSINESS MANAGER

Augustus Thorndike, Jr.

*Room 111, Harvard Medical School,
 Boston, Mass.*

Post-Graduate
Instruction

A basic reason for the existence of a medical school is the obligation to provide the community with men and women capable of caring for the sick and helpful in the prevention of disease in both the individual and the community. If this is granted, and I believe all will agree to this, then it is reasonable to assume that the obligation does not end with the graduation of the student from the medical school and the completion of his clinical training in a hospital. Were medicine a static subject, changing but little from year to year in the understanding of disease and methods of their management, the medical school could be said to have completed its obligation when the student has obtained his medical degree. However, in medicine there is constant progress, new knowledge is being obtained, diseased conditions are becoming better understood, and, as a result, methods both of treatment and prevention are being constantly improved. What it suffices the practitioner to know today, in a short time may, and often does, become inadequate.

The medical school has an obligation to

keep the graduate in touch with the newer knowledge and enable him to apply newer and better methods of diagnosis, treatment, and prevention as they are developed. The graduate, too, has an obligation to the community in which he lives and works. He must make every effort to keep in touch with the developments that are going on in medicine and be in a position to utilize improved methods as they are developed, sacrificing some of his time and being willing to pay a proportionate part of the cost to this end. These two obligations are interrelated, and if properly met, should result in a progressively improving way of utilizing medical knowledge in the betterment of health.

How can a medical school do its part in this obligation? Courses of various types should be offered, so that the graduate of medicine may return to a medical school periodically to learn. These courses should be numerous and various so as to fulfill the needs of different practitioners, including general review courses as well as instruction in special fields of medicine. The medical school should carry to the practitioner instruction by means of lectures, demonstrations, and clinics held in the community where the medical man resides, as well as providing the same in the medical school buildings and affiliated hospitals. So-called annual "clinic weeks" are being found valuable in post-graduate instruction. Annual meetings of several days' duration, where teachers give clinics and demonstrations, are deservedly popular. Local, State, and interstate organizations function in this way. It is the duty of those connected with medical schools and well-organized hospital clinics to participate in such meetings.

For years the Harvard Medical School has been fulfilling this obligation to the medical profession and doing it increasingly well. In recent years more has been done, and rightly, in carrying post-graduate instruction to the graduate in medicine, there-

by saving him expense and reducing the time lost from his practice to a minimum. This institution is desirous of doing more and more to facilitate a continued post-graduate education of its own alumni as well as of the graduates of other medical schools, and expects to plan for further developments in both locally-given instruction and instruction carried into the various communities of contiguous territory.

HENRY A. CHRISTIAN, M.D.

* * *

The Treasurer's Appeal Your treasurer is asking again for support. He finds in reviewing the subscriptions for this year that 30 per cent. less alumni have answered the first appeal. In the first one and one-half months since the appeals have been sent out, only 28 per cent. have replied. We aim to reach all alumni, and we hope that you will fill out and return the subscription card. All alumni receive the BULLETIN gratis and we urge all those who are disposed, to submit subscriptions.

* * *

OUR TUBERCULOSIS PROBLEM

To the EDITOR:

Those who followed the discussion in regard to tuberculosis among medical students in the BULLETIN last year, will be interested in a recent survey of this problem carried out by McPhedran, Landis, and Opie at the Medical School of the University of Pennsylvania. The incidence of tuberculous infection as indicated by the tuberculin test, by X-ray signs of calcification or infiltration, and by manifest physical signs, was determined in a group of 452 medical students and compared with a group of premedical college students and a group of high school boys.

The frequency of positive tuberculin tests increased with age, occurring in 77.8 per cent. of the high school boys, 85.6 per cent. of the college students, and 93.6 per cent. of the medical students. Roentgenologic evidence of tuberculous infiltrations

at the apex of the lungs was found somewhat more frequently in the college than in the high school group but increased rapidly after the first year in medical school. The figures of the medical school students are as follows: first year, 4.1 per cent.; second year, 11.6 per cent.; third year, 14 per cent.; fourth year, 20.5 per cent. Thirteen of the students in the fourth year had advanced lesions extending from the apex below the clavicle. Manifest pulmonary tuberculosis, associated with definite symptoms or physical signs, occurred once among the premedical students examined; once during the first two years of medicine; four times in the third-year class in medicine; and nine times in the fourth-year class. Such figures deserve serious consideration.

They confirm the opinion expressed by Steidl in the BULLETIN, that the problem of tuberculosis among medical students is a very real one. Making all possible allowances for differences in diagnostic criteria between Philadelphia and Boston, one wonders if some incipient cases in our medical school are not being overlooked.

One cannot help but wonder what a similar survey of the situation at the Harvard Medical School would yield. Our Director of Student Health has stated that "On the whole . . . tuberculosis so far has proved to be of relatively negligible importance amongst our undergraduates nor has it developed except rarely, as judged by follow-up cards, in any of the men who have been examined by my group since the fall of 1927." The data on which this statement rests are drawn partly from annual examinations of students and partly from X-ray evidence. X-ray examinations were limited chiefly to cases in which there was suspicion of tuberculosis either from the history or the physical examination. In 417 Harvard Medical School students who were thus X-rayed "surprisingly little active tuberculosis" was encountered.

Apparently it is not considered a "problem" at Harvard. The writer, who no doubt has a distorted view of the subject

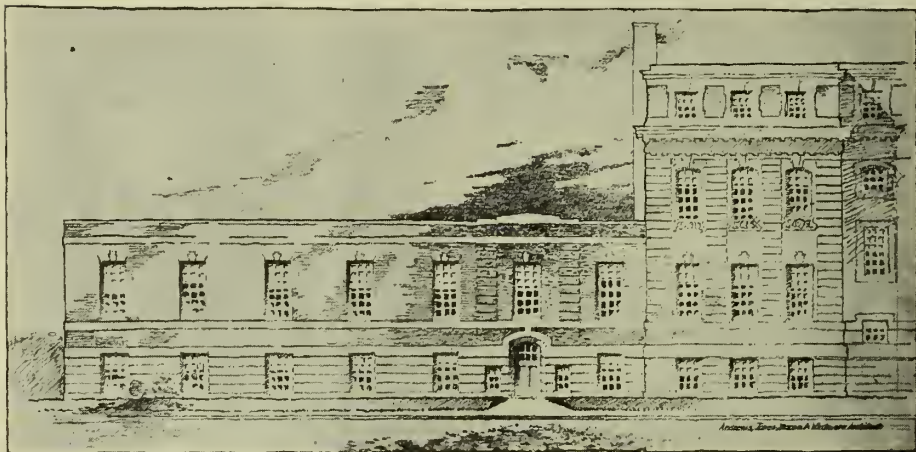
because twelve members of his class (1924) have gone to sanatoria with pulmonary tuberculosis, would like to see as thorough a survey done at Harvard as was done at Pennsylvania. It seems to him that

such a survey might have prevented some of the disasters in his own class, most of which occurred shortly after graduation.

GEORGE P. REYNOLDS, M.D.

Boston.

The Jackson Memorial Research Wing



ON Thursday, December 10, the new Jackson Memorial Research Wing of the House of the Good Samaritan was opened in Brookline. For the past ten years this hospital has devoted many beds to the care of patients with rheumatic fever and rheumatic heart disease. The long-time hospital care of such cases fills a much felt need in the community. Many alumni will remember with pleasure having had part of their early medical training on the wards at the Good Samaritan.

Several years ago it was determined that giving hospital care to these cases was not sufficient, and the board of managers organized a research department to further the usefulness of the hospital to the community and to medical science. The opportunity for study of the disease here offered is splendid, since the period of hospitalization is usually a long one. A campaign to raise funds for the purpose of financing the research department was successfully

carried out a year ago. The present new building has been constructed to further the facilities of the hospital and to give adequate facilities to the research department.

The building, as shown in the architects' drawing above, is a two-story brick wing. There is on the ground floor a waiting room, two examining rooms for follow-up work, a cardiographic laboratory, a fluoroscopic room, an animal room, two laboratories, and a small sterile room for culture work. The second floor includes house officers' rooms, record room, office, library, school-room, and a large room to be used for meetings and as a play room. The staff was pleased to have the new building inspected by Sir Thomas Lewis on his recent visit to the United States. It is hoped and expected that with the facilities now at hand, the research department may add information of value concerning the etiology and treatment of rheumatic fever and the resultant heart disease.

